## I. Real Party in Interest

The real party in interest for this appeal is the General Motors Corporation of Detroit, Michigan, the assignee of this application.

## II. Related Appeals and Interferences

There are no related appeals or interferences.

## III. Status of the Claims

Claims 1-20 are pending in this application. Claims 7-12, 14, 15 and 20 have been withdrawn from consideration as being directed to a non-elected species. Claims 1-6, 13 and 16-19 stand rejected. Claims 1-6, 13 and 16-19 are on appeal and are rejected. No claim has been cancelled. No claim has been allowed. No claim has been objected to.

## IV. Status of Amendments

All amendments have been entered.

## V. Summary of Claimed Subject Matter

Each of the independent claims 1, 13 and 18 claims storing a compressor map defining the operation of a compressor used in a fuel cell system. Figure 1 is a graph with mass flow on the horizontal axis and discharge pressure on the vertical axis showing a typical example of a compressor map 50 for a turbo-machine type compressor. The compressor map 50 includes a surge line 54 where if the operation of the compressor is on a left side of the line 54, it is in a surge condition that could cause damage to the compressor, see paragraph [0007], page 2, line 19 - page 3, line 3.

Independent claims 1, 13 and 18 claim a fuel cell system, such as fuel cell system 10 shown in figure 2, and discussed in the specification beginning at paragraph

Whether claims 1, 2, 4-6, 13, 16 and 17 should be rejected under 35 US 103(a) as being unpatentable over U.S. Patent Publication No. 2002/0039672 to Aramaki (hereinafter Aramaki) in view of Mitani; and

Whether claim 3 should be rejected under 35 USC 103(a) as being unpatentable over Aramaki in view of Mitani and U.S. Patent Application Publication No. 2002/0150805 to Stenersen et al. (hereinafter Stenersen).

## VII. Argument

### A. Claims 18 and 19 are not anticipated by Mitani

#### 1. Independent claim 18

Independent claim 18 claims a method for preventing a surge condition of a compressor in a fuel cell system that includes storing a compressor map of the compressor and using the compressor map and the speed of the compressor to determine the location on the compressor map that the compressor is operating and preventing the compressor from entering the surge condition.

#### 2. Mitani

Mitani discloses a turbo-compressor system for fuel cell power generation. The system includes a turbine 14 that drives a compressor 12, where the compressor 12 provides a flow of air on air feed line 15 to an air chamber 8 in a fuel cell 1. Figure 1 in Mitani shows a compressor map similar to the compressor map in figure 1 of Appellant's Specification. The Mitani compressor map includes a surge line I that separates the map into a surge portion A on the left side of the line I where the compressor 12 is in a surge condition, and a non-surge portion B on the right side of the line I where the compressor 12 is not in a surge condition. A by-pass line 17 is provided from the feed line 15 to a line 16 between the turbine 14 and a modifier 2. A flow regulating valve 18